

Abstract

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A two variable data interpolating system by which the operating quantity can be decreased and few errors are produced. A data processor comprises a discrete value extracting section 10 for performing interpolation between pieces of discrete data arranged at predetermined intervals on a two-dimensional space, a sampling function operating section 20, and a convolution operating section 30. The discrete value extracting section 10 extracts discrete data included in a predetermined range around a point concerned to be an object, and the sampling function operating section 20 calculates, when the position of the point concerned is specified, the value of the interpolating position based on the distance between the point concerned and the discrete data by using a sampling function of local support which can be differentiated only once over the whole region. The convolution operating section 30 multiplies the values of the sampling functions calculated by the sampling function operating section 20 by the values of the discrete data, adds up the products, thus performing convolution operation and outputting the interpolation value.

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